associated with a comparison of local treatments for genital warts.

We are sure that all genitourinary physicians are aware that trichloroacetic acid (TCAA) is a crystalline solid that, on exposure to air, shows its deliquescent quality of absorbing water and dissolving to form a solution. When the solid is first made available for clinical use it is usually made into a solution by adding a small amount of water to the crystals (for example, 2·5 ml water to 25 g TCAA, providing a 98% solution).

However, repeated opening of the container exposes the TCAA solution to the atmosphere, which allows the deliquescent process to continue. So the solution becomes progressively more dilute until an equilibrium is reached. Even then the concentration of the solution will vary depending on the atmospheric water pressure at the time. So the concentration of the TCAA solution in use in departments of genitourinary medicine is variable (up to 98%), and only by using a solution freshly prepared on the occasion of each treatment could one claim to have used a standard concentration.

In the above study we aimed to mimic the clinical situation and so used the preparation of TCAA in current use in the clinic. We would point out that just as the strength of this solution inevitably varied, so too the volume applied to each unit area of wart must have varied.

Trichloroacetic acid has now been renamed trichloroethanoic acid by the International Union of Pure and Applied Chemistry.

Yours faithfully,
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TO THE EDITOR, *Genitourinary Medicine*

Delayed presentation of patients with genital warts

Sir,

The number of reported cases of genital warts in Britain is increasing.[1] Many patients are unaware that genital warts are sexually transmitted and are linked with genital tract malignancy. Despite recent media coverage, our clinic patients (who derive mainly from lower socioeconomic groups), do not appear to be sufficiently aware of these facts. This study was conducted to highlight this lack of knowledge. All new patients presenting to the genitourinary medicine clinic were included in the study if they complained of genital warts. Men with symptoms of urethritis were used as controls for the men, and women with vaginal discharge were used as controls for the women. The Mann-Whitney U test was used for statistical analysis.

The median time from onset of symptoms to presentation at the clinic of 33 men with warts was 92 (range 3 to 1825) days compared with seven (range 1 to 21) days for 30 men with urethritis ($p < 0.001$). Of the 30 men with urethritis, eight had gonorrhoea and 22 had non-gonococcal urethritis. During the interval before medical advice was sought, the median number of occasions of sexual intercourse was 10 (range 0–750) for men with warts, and none (range 0–4) for men with urethritis ($p < 0.001$). The median number of sexual partners during this period for men with warts was 1 (range 0–15) compared with 0 (range 0–1) for men with urethritis ($p < 0.001$). Condoms were used regularly by only one man, occasionally by three men, and never by the remainder of the patients with warts. Only five of 33 men with genital warts knew that they were sexually transmissible.

The median delay in presentation of 23 women with warts was 56 (range 3 to 365) days, shorter than that for men ($p = 0.034$), but not significantly different from that of 26 women with vaginal discharge (mean 52 (range 1 to 730) days). The women with vaginal discharge had several diagnoses. For women with warts, during the interval before presentation the median number of occasions of sexual intercourse was 13 (range 0–156) compared with a median of one occasion (range 0–122) for those with vaginal discharge ($p = 0.029$). None of the women with warts were aware of their mode of transmission, and condoms were used by the consort of only one woman on an occasional basis.

Patients with genital warts thus present to this clinic after a substantial delay, during which time sexual partners are exposed to the infection. This delay may be a major factor in the current epidemic of genital warts. Men with urethritis, particularly those with gonorrhoea may experience unpleasant symptoms, and hence present early for treatment. In addition, men are usually aware of the probable origin of a urethral discharge, and that it may be caused by sexually transmitted agents. By contrast, genital warts may not unduly trouble patients, and many patients are unaware of their mode of spread and possible adverse consequences. A combination of these factors probably explains the delay in presentation of patients with warts. Women with vaginal discharge often present late because of failed treatment by other doctors rather than because of the possibility of sexually transmitted disease. Several of the strains of human papillomavirus that cause genital warts have been implicated in the pathogenesis of cervical intraepithelial neoplasia (CIN), and a delay in treating women with warts is possibly a factor in the development of CIN.[2]

These findings indicate that our local population requires more education before we can hope to control the current epidemic of wart virus infection and prevent the late sequelae that are already overloading our cytology and colposcopy services. Campaigns to increase the use of condoms have not had any impact on this population.

We thank Mr C R West for statistical advice.

Yours faithfully,
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TO THE EDITOR, *Genitourinary Medicine*

Evaluation of abnormal cervical cytology results at a genitourinary medicine clinic

Sir,

Recent reports have indicated that an inflammatory or mildly atypical cervical smear may mask more serious cellular changes.[1-3] Patients with abnormal smears who attend departments of genitourinary medicine have a high incidence of genital tract infections.[4] The present study was conducted to evaluate the incidence of abnormal smears in a genitourinary medicine (GUM) clinic.

We evaluated 100 unselected new patients, the only exclusions being women who were menstruating at the time of their first clinic visit. Cervical cytology was performed after

standard screening tests for sexually transmitted diseases. Cervical swabs were also taken for mycoplasma and ureaplasma studies, and for herpes simplex virus isolation.

The cytology reports on these 100 patients showed that one had cancer, 25 had dyskaryosis suggestive of the three grades of cervical intraepithelial neoplasia (CIN) (CIN I in association with changes indicative of human papillomavirus (HPV) infection (16), CIN I to II (5), CIN II (2), and CIN II to III (2)), 51 had negative results, 10 yielded inadequate smears, six yielded inflammatory smears, six smears contained monilia, and one had changes indicative of herpes simplex virus (HSV) infection. The table documents the organisms that were found in the main cytological groups. The χ^2 test with Yates's correction was used for statistical analysis. No significant difference between cytological groups was found regarding the prevalence of mycoplasmas and ureaplasmas.

Our findings indicated that, using the reporting methods of our laboratory, cervical cytology in women attending a genitorinary medicine clinic yields many neoplastic smears, but few inflammatory smears. A specific organism was present in each patient with an inflammatory smear. A larger study currently in progress will evaluate the cytological response to antimicrobial treatment in women with abnormal smears. Any patients with persisting abnormalities will undergo colposcopy. Organisms definitely acquired sexually were more prevalent in patients with neoplastic smears than in those with negative smears ($p < 0.05$), and were more prevalent in those with inflammatory cytology results than in those with negative smears ($p < 0.01$). No significant differences were detected between these cytological groups regarding organisms not definitely sexually transmitted, but known to be capable of causing cytological abnormalities.

The purpose of performing cervical cytology at a genitourinary medicine clinic is to opportunistically screen patients from a high risk population. We recommend that cytology should be performed at the first clinic visit to maximise the pick up of serious cytological abnormalities in patients who might not otherwise reattend. A small number of inflammatory or unsatisfactory smears will result from this policy, but if necessary a repeat smear may be taken at a follow up visit.

Table *Organisms or conditions found on cytology*

Organisms or conditions	*No whose cytology results showed:*		
	Cancer or CIN (n = 26)	*Inflammation (n = 6)*	*Negative (n = 51)*
Sexually transmitted: (*Chlamydia trachomatis, Trichomonas vaginalis, Neisseria gonorrhoeae*)	10	4	6
Causing abnormalities: (*Candida albicans,* bacterial vaginosis)	13	5	22

CIN = Cervical intraepithelial neoplasia.

Yours faithfully,
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